

REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

Claims 11, 13, 15, 17, 19, 22, and 24-27 are currently pending in the application.

Claims 2-10 were previously canceled without prejudice or disclaimer. Claims 1, 12, 14, 16, 18, 20, 21, and 23 have been canceled without prejudice or disclaimer to simplify issues in the present application. Claim 17 has been amended to depend on pending Claim 11, instead of cancelled Claim 1. Claim 22 has been amended to correct the inadvertent error discussed at the meeting with the examiner that is more fully treated below. New Claims 24-27 have been added to be dependent on independent Claim 22 while replicating the subject matter of Claims 13, 15, 17, and 19 that all now depend on independent Claim 11. Clearly, these claim amendments and additions do not introduce any new matter.

The outstanding Office Action presents a rejection of Claim 23 under the second paragraph of 35 U.S.C. § 112, a rejection of Claims 1, 17, 21, and 22 under 35 U.S.C. § 103(a) as being unpatentable over Scifres et al. (U.S. Patent No. 4,984,242, Scifres) in view of Inoue et al. (U.S. Patent No. 5,019,874, Inoue), and a rejection of Claims 11-16, 18-20 and 23 under 35 U.S.C. § 103(a) as being unpatentable over Scifres in view of Inoue in further view of Sugawara et al (U.S. Patent No. 5,153,889, Sugawara).

Initially, Applicant thanks Examiner Ha for meeting with his representative on August 23, 2005.

During this meeting, proposed changes to Claims 22 and 23 were discussed. These proposed changes were presented to overcome inadvertent errors that had been noted in these claims that were discovered when reviewing the claims relative to the rejection of Claim 23 under the second paragraph of 35 U.S.C. § 112. However, as Claim 23 has been canceled, only the correction of Claim 22 is included in the present amendment.

In addition to these formal matters, Applicant's representative brought up several points as to Claim 1 and the differences between FIGS. 2 and 4B of the present application and FIG. 2 of Scifres. However, the Examiner noted that the outstanding rejection was based upon the combination of at least Scifres and Inoue and that Inoue was relied on to teach the dense defect layer, not Scifres. In any event, the cancellation of Claim 1 renders this August 23, 2005, discussion thereof moot.

With further regard to independent Claims 11 and 22, Applicant's representative noted several factors that were believed to point away from any valid combination of the teachings of Scifres and Inoue during the above-noted discussion on August 23, 2005. In this respect, it was noted that the combination of Scifres and Inoue was not reasonably taught because the semiconductor device taught by Inoue was clearly not a semiconductor light emitting device, much less a light emitting device having clad layers sandwiching an active layer like the light emitting device of Scifres and the invention set forth by these independent claims. It was also noted that Inoue teaches the placement of its suggested dense defect area in a buffer layer 13 associated with epitaxial layer 12a that interfaces with substrate 11 in order to trap defects originating from this interface of substrate 11 and epitaxial layer 12a. The disclosure of col. 5, lines 10-22, of Inoue was specifically noted in this regard. It was also noted that the outstanding Action does not explain how Inoue or Scifres are interpreted to suggest the recitations of Claims 11 and 22 as to the claimed defect layer being directly formed on the second clad layer that is formed on the active layer. The examiner agreed to consider these arguments when they were filed.

Turning to the rejections as stated in the outstanding Action, it is noted that the rejection of Claim 23 under the second paragraph of 35 U.S.C. § 112, the rejection of Claims 1 and 21 as being unpatentable over Scifres in view of Inoue, and the rejection of Claims 12, 14, 16, 18, 20 and 23 under 35 U.S.C. § 103(a) as being unpatentable over Scifres in view of

Inoue in further view of Sugawara, are considered to be moot in light of the cancellation of these claims.

Turning to the rejection of independent Claim 11 as being unpatentable over Scifres in view of Inoue and Sugawara and the rejection of independent Claim 22 as being unpatentable over Scifres in view of Inoue, it is first noted that Sugawara is only relied upon to teach a current spreading layer as to the subject matter of independent Claim 11. The remainder of Claim 11 subject matter (and all that of Claim 22) is suggested in the outstanding Action to be taught by Scifres in view of Inoue. However, and as fully discussed at the above-noted August 23, 2005, meeting, neither Scifres nor Inoue can be reasonably said to teach the Claim 22 “defect region” nor the Claim 11 “defect layer” as “being directly formed on said second clad layer.” Clearly, before the subject matter of Claims 11 and 22 can be said to be obvious, the PTO must explain how the references being applied suggest all of the subject matter of the rejected claims. See MPEP § 2143.03, for example.

Furthermore, and as noted during the above-noted discussion as to the disparate non-light element teachings of Inoue, there is no reasonable basis presented in the outstanding Action to suggest motivation for combining teachings from the non-light device of Inoue to modify the basic intended operation of the light emitting device of Scifres. Note *In re Lee*, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002) and the requirement there for the PTO to “explain the reasons one of ordinary skill would have been motivated to select the references and to combine them to render the claimed invention obvious.”

It is again emphasized that in the embodiment of Scifres relied upon in the outstanding Action, the concern is adding a strain layer 27 into a cladding layer 25, never outside such a cladding layer. See col. 4, lines 35-38, of Scifres describing adding the high concentration of indium that forms strain layer 27 to the cladding material. Accordingly, the PTO must fully explain what would have led the artisan to consider using the Inoue defect

layer designed to solve a problem arising from an interface that is not in a light producing device as a substitute for the Scifries strain layer that must be formed in the cladding layer of a light emitting device. Said differently, the PTO must explain fully why the artisan would have been led to abandon the teachings of Scifres and to replace the Scifres strain layer 27 with a defect layer. See In re Lee, 277 F.3d at 1342, 61 USPQ2d at 1432-33 (“the agency tribunal must present a full and reasoned explanation of its decision.”).

Moreover, as the suggested modification of Scifres amounts to “a substantial reconstruction and redesign of the elements shown in [Scifries] as well as a change in the basic principle under which the [Scifries] construction was designed to operate,” the suggested modification cannot be said to be *prima facie* obvious. See In re Rattie, 270 F.2d 810, 813, 123 USPQ 349, 352 (CCPA 1959). In this regard, even if Fig. 2 of Scifres could be interpreted to show strain layer 27 as being on the lower portion of clad layer 25 that is on the substrate 23, the active layer 29 is not formed on this lower portion of the clad layer as Claims 11 and 22 require. Instead, the active layer 29 is formed on the clad layer portion of 25 between 27 and itself. Also, Claims 11 and 22 require the second clad layer to be formed on the active layer that can only be read on upper clad layer 25 that is over layer 29. It is this second clad (that is formed on the active layer) that must have the defect region (Claim 22) or defect layer (Claim 11) formed thereon.

As the teachings of Sugawara do not cure the above noted deficiencies of Sifries and Inoue, it is believed that independent Claim 11 clearly patentably defines over these references for all the reasons noted above. In addition, it is respectfully submitted that independent Claim 22 clearly patentably defines over Sifries and Inoue for all the reasons noted above.

Moreover, as Claims 13, 15, 17, and 19 all depend from Claim 11 and as new Claims 24-27 all depend from Claim 22, it is respectfully submitted that these dependent claims

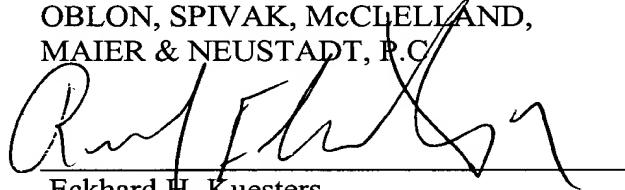
Application No. 08/578,980
Reply to Office Action of 04/18/2005

define patentably over Scifres taken in view of Inoue in further view of Sugawara, or Scifres in view of Inoue for the reasons set forth above as to parent Claims 11 and 22. In addition, as these dependent claims add further features to their respective independent claims that are not taught or suggested by the above-noted applied references taken alone or together in any proper combination, they are respectively submitted to patentably distinguish over these applied references for this reason as well.

Accordingly, the outstanding rejections are traversed and the pending claims are believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Eckhard H. Kuesters
Attorney of Record
Registration No. 28,870

Raymond F. Cardillo, Jr.
Registration No. 40,440

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413-2220
(OSMMN 06/04)